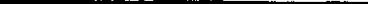


Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO			Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Application Number	10/142,684 & 25,801	
			Filing Date	5/10/2002 7/23/03	
			First Named Inventor	Anthony C. Zuppino	
			Art Unit	3945 1753	
			Examiner Name	TBA Diamond	
Sheet	1	of	1	Attorney Docket Number	22122878-12

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	5/1/24
-----------------------	---	--------------------	--------

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

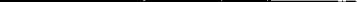
Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT			
(use as many sheets as necessary)			
Sheet	of	Application Number	10/142,684-125,801
		Filing Date	5/10/2003 7/23/2003
		First Named Inventor	Anthony C. Zunpero
		Art Unit	1753
		Examiner Name	Diamond, Alan D.
		Attorney Docket Number	22122878-12

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	5/1/04
-----------------------	---	--------------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet _____ of _____

Complete if Known

Application Number	10/142,184 625,801
Filing Date	5/10/2002 7/13/2003
First Named Inventor	Anthony C. Zuppero
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T2
ADD	7	AUERBACH, Daniel J.; "Hitting the Surface-Softly"; Science, 294, (2001), pp. 2488-2489	-
ADD	8	BONDZIE, V. A., et al.; "Oxygen adsorption ... gold particles ... TiO ₂ (110)"; J. Vac. Sci. Tech. A., (1999) 17, pp. 1717 and figure 3	-
ADD	9	BOULTER, James; "Laboratory Measurement of OH ..."; http://pearl.lanl.gov/wsa2002/WSA2002talks.pdf (2402).	-
ADD	10	CHAN H.Y.H., et al.; "Methanol Oxidation On Palladium Compared To Rhodium..."; J. Catalysis v. 174(#2) pp. 191-200 (1998) (abstract and figure 1 only)	-
ADD	11	CHIANG, T.-C.; "Photoemission studies of quantum well states in thin films"; Surf. Sci. Rpts.39 (2000) pp 181-235	-
ADD	12	CHUBB, D. L., et al; "Semiconductor Silicon as a Selective Emitter"; http://www.thermopv.org/TPV5-2-05-Chubb.pdf (abstract only) (Date Unknown).	-
ADD	13	CORCELLI, S. A., et al.; "Vibrational energy pooling in CO on NaCl(100) ..."; J. Chem. Phys. (2002) 116, pp. 8079-8092	-
ADD	14	DANESE, A., et al.; "Influence of the substrate electronic structure on metallic quantum well ..."; Prog. Surf. Sci., 67, (2001), pp 249-258	-
ADD	15	DAVIS, J. E., et al.; "Kinetics and dynamics of the dissociative chemisorption of oxygen on Ir(111)"; J. Chem. Phys. 107 (3), (1997), pp 943-952	-

Examiner
Signature*Alan D. Diamond*Date
Considered

6/1/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

† Applicant's unique citation designation number (optional). ‡ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 1**Complete If Known**

Application Number	10/142,118 (,25, 801)
Filing Date	5/10/2002 7/23/2002
First Named Inventor	Anthony C. Zuppoco
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Y ²
ADD	16	DIEKHONER, L., et al.; "Parallel pathways in methanol... Pt(111)"; Surf. Sci. 409 (1998) pp 384- 391	-
ADD	17	DIESING, D., et al.; "Aluminium oxide tunnel junctions..."; Thin Solid Films, Vol. 342 (1-2) (1999) pp. 282-290	-
ADD	18	DIMATTEO, R. S., et al.; "Enhanced photogeneration of carriers... vacuum gap"; Appl. Phys. Let. (2001) 79, pp. 1894-1896	-
ADD	19	DIMATTEO, R. S., et al.; "Introduction to and Experimental Demonstration of Micron-gap ThermoPhotoVoltaics"; http://www.thermopv.org/37DiMatteo.htm (abstract only) (Date Unknown)	-
ADD	20	DOGWILER, Urs, et al.; "Two-dimensional ... catalytically stabilized ... lean methane-air ..."; Combustion and Flame, (1999), 116(1,2), pp 243-258	-
ADD	21	ECHENIQUE, P. M., et al.; "Surface-state electron dynamics in noble metals"; Prog. Surf. Sci., 67, (2001), pp 271-283	-
ADD	22	ENDO, Makoto, et al.; "Oxidation of methanol ... on Pt(111) ..."; Surf. Sci. 441 (1999) L931-L937, Surf. Sci. Letters	-
ADD	23	FAN, C. Y., et al.; "The oxidation of CO on RuO ₂ ..."; J. Chem. Phys. 114, (2001), pp. 10058-10062	-
ADD	24	FANN, W.S., et al.; "Electron thermalization in gold"; Phys. Rev. B (1992) 46 pp. 13592-13595	-

Examiner
SignatureDate
Considered

6/1/04

¹EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

²Applicant's unique citation designation number (optional). ³Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

of

Complete If Known

Application Number	10/142,684 625,801
Filing Date	5/10/2002 7/23/2003
First Named Inventor	Anthony C. Zuccaro
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
ADD	25	GEE, Adam T., et al.; "The dynamics of O ₂ adsorption on Pt(533)..."; J. Chem. Phys.(2000) 113, pp. 10333-10343	-
ADD	26	GERGEN, Brian, et al.; "Chemically Induced Electronic Excitations at Metal Surfaces"; Science,294, (2001) pp. 2521-2523	-
ADD	27	GULANTS, Elena A., et al.; "A 0.5-μm-thick polycrystalline silicon Schottky.."; Appl. Phys. Lett., (2002), 80, pp. 1474-1476	-
ADD	28	GUMHALTER, B., et al.; "Effect of electronic relaxation ... adsorption reaction rates"; Phys. Rev. B (1984) 30 pp. 3179-3190	-
ADD	29	HALONEN, Lauri, et al.; "Reactivity of vibrationally excited methane on nickel..."; J. Chem. Phys.(2001) 115, pp. 5611-5619	-
ADD	30	HASEGAWA, Y., et al.; "Modification of electron ... standing wave ... Pd ..."; Surf. Sci., in press, 11 April 2002	-
ADD	31	HENRY, Claude R.; "Catalytic activity ... nanometer-sized metal clusters"; Applied Surf. Sci., 164, (2000) pp 252-259	-
ADD	32	HESS, S., et al.; "Hot Carrier Relaxation ... Phonon Scattering in GaN"; http://www.physics.ox.ac.uk/rtaylor/images/hot%20carrier%20poster.pdf (Date Unknown)	-
ADD	33	HO, Wilson; http://www.lassp.cornell.edu/lassp_data/wilsonho.html (Date Unknown).	-

Examiner
Signature*Alan D. Diamond*Date
Considered

5/1/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet _____ of _____

Complete if Known

Application Number	10/142,684-625,801
Filing Date	3/10/2002 7/23/2003
First Named Inventor	Anthony C. Zuccero
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
ADD	34	HOHLFELD, J, et al.; "Electron and lattice dynamics ... optical excitation of metals"; Chemical Physics, 251 (2000) pp 237-258	-
ADD	35	HONKALA, Karoliina, et al.; "Ab initio study of O ₂ precursor states on the Pd(111)..."; J. Chem. Phys. (2001) 115, pp. 2297-2302	-
ADD	36	HOU, H. ; Y., et al.; "Chemical Interactions of Super-Excited Molecules on Metal Surfaces"; http://www2.chem.ucsb.edu/~wodtke/papers/dani.pdf (Date Unknown).	-
ADD	37	HOU, H., et al.; "Direct multiquantum relaxation of highly vibrationally excited NO ..."; J. Chem. Phys., 110, (1999) pp 10660 - 10663	-
ADD	38	HUANG Y., et al.; "Observation of Vibrational Excitation and Deexcitation for NO from Au(111) ..."; Phys. Rev. Lett., 84, (2000) pp 2985 - 2988	-
ADD	39	HUANG, Yuhui, et al.; "Vibrational Promotion of Electron Transfer"; SCIENCE, VOL 290, 6 OCTOBER 2000, pp 111 - 113	-
ADD	40	IBH; "NanoLED overview"; http://www.ibh.co.uk/products/light_sources/nanoled_main.htm (Date Unknown).	-
ADD	41	IBH; "Red picosecond laser sources"; http://www.ibh.co.uk/products/light_sources/nanoled/heads/red_laser_heads.htm (Date Unknown).	-
ADD	42	IFTIMIA, Ilieana, et al.; "Theory ... scattering of molecules from surface"; Phys. Rev. B (2002) 65, Article 125401	-

Examiner
Signature*Alan D.*Date
Considered

5/1/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1448B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

of

Complete If Known

Application Number	10/142,684 (25,801)
Filing Date	5/10/2002 7/13/02
First Named Inventor	Anthony C. Zuppero
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
ADD	43	ISHIKAWA, Yasuyuki, et al.; "Energetics of H ₂ O dissociation and COads+OHads reaction .. Pt.."; Surf. Sci. preprints SUSC 12830, 27 April 2002	—
ADD	44	JOHNSON, R. Colin ; "Molecular substitution ...terahertz switch arrays"; EE Times, (04/10/00, 3:35 p.m. EST) http://www.eet.com/story/OEG20000410S0057	—
ADD	45	KAO, Chia-Ling, et al.; "The adsorption ... molecular carbon dioxide on Pt(111) and Pd(111)"; Surf. Sci., (2001) Article 12570	—
ADD	46	KATZ, Gil, et al.; "Non-Adiabatic Charge Transfer Process of Oxygen on metal Surfaces"; Surf. Sci. 425(1) (1999) pp. 1-14	—
ADD	47	KAWAKAMI, R. K., et al.; "Quantum-well states in copper thin films"; Nature, 398, (1999) pp 132 - 134	—
ADD	48	KOMEDA, T., et al.; "Lateral Hopping of Molecules Induced by Excitation of Internal Vibration..."; Science, 295, (2002) pp 2055-2058	—
ADD	49	LEWIS, Steven P., et al.; "Continuum Elastic Theory of Adsorbate Vibrational Relaxation"; J. Chem. Phys. 108, 1157 (1998)	—
ADD	50	LEWIS, Steven P., et al.; "Substrate-adsorbate coupling in CO-adsorbed copper"; Phys. Rev. Lett. 77, 5241 (1996)	—
ADD	51	LI, Shengping, et al.; "Generation of wavelength-tunable single-mode picosecond pulses ..."; Appl. Phys. Lett. 76, (2000) pp 3676 - 3678	—

Examiner
SignatureDate
Considered

6/1/04

¹EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

²Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

of

Complete If Known

Application Number	10/142,684 625,801
Filing Date	5/16/2004 7/23/2003
First Named Inventor	Anthony C. Zuppero
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T2
ADD	52	MITSUI, T., et al.; "Coadsorption and interactions of O and H on Pd(111)"; Surf. Sci., Article 12767, (2002)	-
ADD	53	MOULA, Md. Golam, et al.; "Velocity distribution of desorbing CO ₂ in CO oxidation on Pd(110)..."; Applied Surf. Sci., 169-170, pp 268-272 (2001)	-
ADD	54	MULET, Jean-Philippe, et al.; "Nanoscale radiative heat transfer between a small particle ..."; Appl. Phys. Let., 78, (2001) p 2931	-
ADD	55	NIENHAUS, H, et al.; "Direct detection of electron-hole pairs generated by chemical reactions on metal surfaces"; Surf. Sci. 445 (2000) pp 335- 342	-
ADD	56	NIENHAUS, H. ; "Electronic excitations by chemical reactions on metal surfaces"; Surf. Sci. Rpts. 45 (2002) pp 1 - 78	-
ADD	57	NIENHAUS, H., et al.; "Selective H atom sensors using ultrathin Ag/Si Schottky diodes"; Appl. Phys. Let. (1999) 74, pp. 4046-4048	-
ADD	58	NIENHAUS, Hermann; "Electron-hole pair creation by reactions at metal surfaces"; APS, March 20-26, 1999, Atlanta, GA, Session SC33 [SC33.01]	-
ADD	59	NIENHAUS, H, et al.; "Electron-Hole Pair Creation at Ag and Cu ... of Atomic Hydrogen and Deuterium"; Phys. Rev. Lett., 82, (1999) pp. 446-449	-
ADD	60	NOLAN P. D., et al.; "Direct verification of... precursor to oxygen dissociation on Pd(111)"; Surf. Sci. v. 419(#1) pp. L107-L113, (1998)	-

Examiner
SignatureDate
Considered

6/1/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

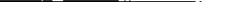
Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		Application Number	10/142,684 G25,801
		Filing Date	5/10/2002 7/23/2003
		First Named Inventor	Anthony C. Zuppero
		Group Art Unit	1753
		Examiner Name	Diamond, Alan D.
Sheet	of	Attorney Docket Number	22122878-12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.*	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T2
ADD	61	NOLAN, P. D., et al.; "Molecularly chemisorbed intermediates to oxygen adsorption on Pt ..."; <i>J. Chem. Phys.</i> 111, (1999), pp 3696 - 3704	-
ADD	62	NOLAN, P. D., et al.; "Translational ... Precursors to Oxygen Adsorption on Pt(111)"; <i>Phys. Rev. Lett.</i> , 81, (1998) pp 3179 - 3182	-
ADD	63	OGAWA, S., et al.; "Optical and Femtosecond Dynamics in Ag/Fe(100) Quantum Wells"; <i>Phys. Rev. Lett.</i> 88, 116801 (2002)	-
ADD	64	PAGGEL, J. J., et al.; "Quantum-Well States as Fabry-Pérot Modes in a ..."; <i>Science</i> , 283, (1999), pp 1709 - 1711	-
ADD	65	PAGGEL, J. J., et al.; "Quasiparticle Lifetime ... Ag/Fe(100) Quantum Wells"; <i>Phys. Rev. Lett.</i> (1998) 81, pp. 5632-5635	-
ADD	66	PAGGEL, J.J., et al.; "Quantum well photoemission from atomically uniform Ag films ..."; <i>Applied Surf. Sci.</i> , 162 -163, (2000), pp 78 -85	-
ADD	67	RETTNER, C. T. , et al; "Dynamics ... chemisorption of O2 on Pt(111)... chemisorbed precursor..."; <i>J. Chem. Phys.</i> (1991) 94, pp. 1626-1635 (abstract only)	-
ADD	68	RINNEMO, Mats; "Catalytic Ignition and Kinetic Phase Transitions"; 1996; http://www2.lib.chalmers.se/cth/diss/doc/9596/RinnemoMats.html	-
ADD	69	ROBERTSON, A. J. B.; "Catalysis of Gas Reactions by Metals"; Logos Press Limited; 1970; LC # 70-80936; pp. 1-5, 10, 41; Great Britain, Adlard & son Ltd	-

Examiner Signature		Date Considered	6/1/04
-----------------------	---	--------------------	--------

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.**

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

of

Complete If Known

Application Number	10/142,684 625 801
Filing Date	5/10/2004 7/23/2003
First Named Inventor	Anthony C. Zuppero
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
ADD	70	SCHEWE, P., et al.; "CO ₂ Production at the Single-Molecule Level"; http://www.aip.org/eneews/physnews/2001/splv561-1.html (2001).	-
ADD	71	SHENG, H., et al.; "Schottky diode with Ag on (110) epitaxial ZnO film"; Appl. Phys. Let. (2002) 80, pp. 2132-2134	-
ADD	72	SMIT, G. D. J., et al.; "Enhanced tunneling across nanometer-scale metal-semiconductor interfaces"; Appl. Phys. Let. (2002) 80, pp. 2568-2570	-
ADD	73	SNOW, E. S., et al.; "Ultrathin PtSi layers patterned by scanned probe lithography"; Appl. Phys. Let. (2001) 79, pp. 1109-1111	-
ADD	74	STIPE, B. C., et al.; "Atomistic studies of O ₂ dissociation on Pt(111) induced by photons ..."; J. Chem. Phys., (1997) 107 pp. 6443-6447	-
ADD	75	SUN, C.-K., et al.; "Femtosecond studies of carrier dynamics in InGaN"; Appl. Phys. Let. (1997) 70 pp. 2004-2006	-
ADD	76	SVENSSON, K., et al.; "Dipole Active Vibrational Motion in the Physisorption Well"; Phys. Rev. Lett., 78, (1997) pp 2016-2019	-
ADD	77	TARVER, Craig M.; "Non-Equilibrium Chemical Kinetic ... Explosive Reactive Flows"; Fall 1999 IMA Workshop: High-Speed Combustion in Gaseous and Condensed-Phase	-
ADD	78	TAYLOR, R.A., et al.; "Strong Electron-LO Phonon Scattering and Hot Carrier Relaxation in GaN"; http://www.physics.ox.ac.uk/rtaylor/images/ha249kw3.pdf (Date Unknown).	-

Examiner
SignatureDate
Considered

6/1/04

¹EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

²Applicant's unique citation designation number (optional). ³Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if known

Application Number	10/142,684,625,801
Filing Date	5/10/2002 7/23/2003
First Named Inventor	Anthony C. Zuppero
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
ADD	79	TEODORESCU, C.M., et al.; "Structure of Fe layers grown on InAs ..."; Appl. Surf. Sci., 166, (2000) pp 137-142	—
ADD	80	TIUSAN, C., et al.; "Quantum coherent transport versus diode-like effect in ..."; Appl. Phys. Lett. 79, (2001) pp 4231-4233	—
ADD	81	TRIPA, C. Emil, et al.; "Surface-aligned photochemistry: Aiming reactive oxygen atoms..."; J. Chem. Phys., (2000) 112 pp. 2463-2469	—
ADD	82	TRIPA, C. Emil, et al.; "Surface-aligned reaction of photogenerated oxygen atoms with ..."; Nature 398, pp 591 - 593 (1999)	—
ADD	83	TRIPA, C. Emil; "Special Adsorption and Reaction Effects at Step Defect Sites on Platinum ..."; http://www.chem.pitt.edu/thesis.html#tripa (abstract only) (Date Unknown).	—
ADD	84	VOLKENING, S., et al.; "CO oxidation on Pt(111)—Scanning tunneling microscopy experiments ..."; J. Chem. Phys. (2001) 114, pp. 6382-6395	—
ADD	85	WATSON, D.T.P., et al.; "Isothermal and temperature-programmed oxidation of CH over Pt..."; Surf. Sci. preprint, year 2001	—
ADD	86	WATSON, D.T.P., et al.; "Surface products of the dissociative adsorption of methane on Pt ..."; Surf. Sci. preprint, c. October 2001	—

Examiner
SignatureDate
Considered

8/11/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet _____ of _____

Complete if Known

Application Number	10/142,684 6/25/801
Filing Date	5/10/2002 7/23/2003
First Named Inventor	Anthony C. Zuppero
Group Art Unit	1753
Examiner Name	Diamond, Alan D.
Attorney Docket Number	22122878-12

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T2
ADD	87	WILKE, Steffen, et al.; "Theoretical investigation of water formation on Rh and Pt Surfaces"; J. Chem. Phys., 112, (2000) PP 9986 - 9995	—
ADD	88	WINTTERLIN, J., et al; "Atomic ...Reaction Rates ... Surface-Catalyzed ..."; Science, 278, (1997) pp. 1931 - 1934	—
ADD	89	WINTTERLIN, J. R., et al.; "Existence of a "Hot" Atom Mechanism for the Dissociation of O ₂ on Pt(111)"; Phys. Rev. Lett., 77, (1996), pp 123 - 126	—
ADD	90	ZAMBELLI, T., et al.; "Complex pathways in dissociative adsorption of oxygen on platinum"; Nature 390, pp 495 - 497 (1997)	—
ADD	91	ZHDANOV, V.P., et al.; "Substrate-mediated photoinduced chemical reactions on ultrathin metal films"; Surf. Sci., V. 432 (#3) pp L599-L603, (1999)	—
ADD	92	ZHDANOV, Vladimir P.; "Nm-sized metal particles on a semiconductor surface, Schottky ..."; Surf. Sci. PROOF SUSC 2931, 20 April 2002	—
ADD	93	ZHUKOV, V. P., et al.; "Lifetimes of quasiparticle excitations in 4d transition metals ..."; Phys. Rev. B (2002) 65, Article 115116	—

Examiner
Signature*Alan D. Diamond*Date
Considered

5/11/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.